Missouri Botanical Garden

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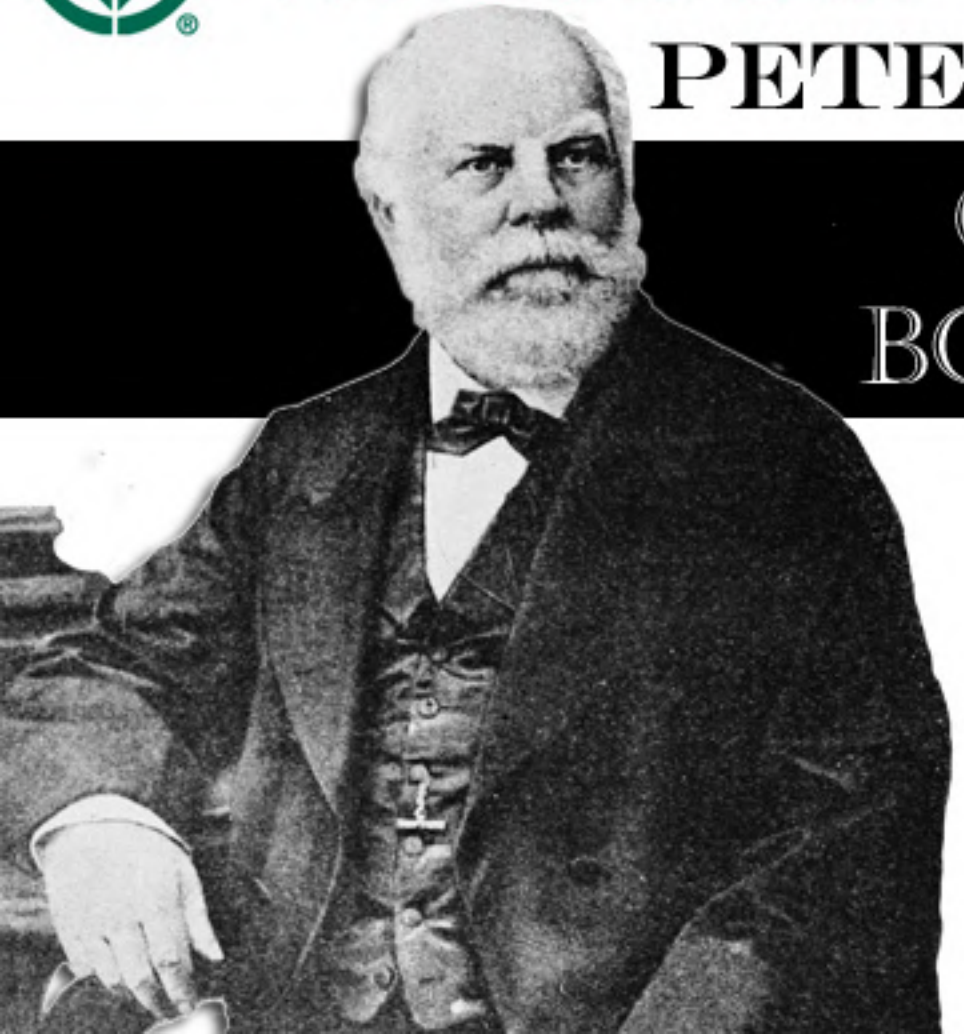

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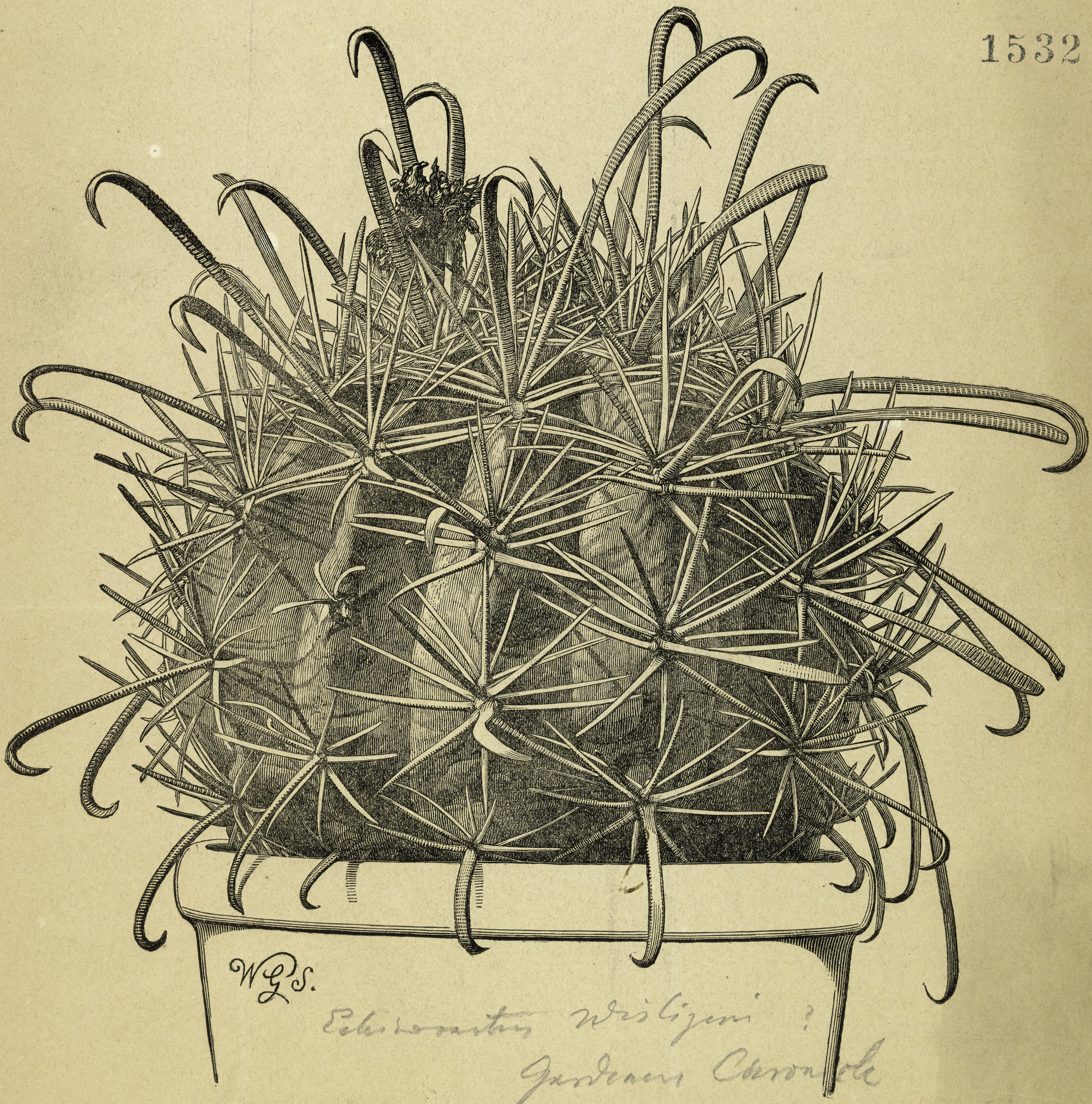

W.G.S.

Echinocactus Wislizeni ?

Fendleri Coloradensis

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gardeners Chron Aug 11 1877

The Eagle's Claw Cactus.—In a late number of your paper (June 16, p. 749) a doubt is expressed whether the figure of the Eagle's Claw Cactus (the Mexicans call all these fish-hook Cacti, and the Indians actually make fish-hooks of those spines) truly represents E. Wislizeni, on account of the length and number of the spines. Botanists are only now learning, and amateurs will by-and-by also learn, that the length as well as the number of spines vary greatly in the same species of Cactus, and that age brings about great changes, not only in the shape of the plants and the number of their ribs, but particularly in the arrangement, number, and size of their spines. Young plants are more globose, with fewer ribs, smaller and fewer spines, in simpler order. In Echinocactus Wislizeni, of which I have seen a great many specimens of all sizes, this is most strikingly the case. As an instance I send you a bunch of spines just received from Arizona, taken from a large flowering plant, which exhibits a new variation of the same species—viz, with curved but never hooked spines. *G. Engelmann, St. Louis, Missouri.*

FIG. 119.—THE EAGLE'S CLAW ECHINOCACTUS.

THE EAGLE'S CLAW ECHINOCACTUS.

THE handsome Echinocactus of which we give an illustration (fig. 119) from a plant in Mr. Peacock's collection is probably, as we learn from Dr. Engelmann, to whom we submitted the drawing, closely allied to E. Wislizeni, a species characterised by the central spine of each tuft being stout, flattened, ribbed, and hooked at the point; others of the spines are weaker and straight, the outermost setaceous, often twisted. Mr. Croucher, who has the two plants side by side, tells us that the present species differs from E. Wislizeni in the larger number of spines, the central hooked one being channelled, and much longer than in the species just named, reaching to 3½ inches. The ribs of the stem are, also, less prominent. The flower is of a pale yellow colour. In any case it is a very striking plant, sure to be appreciated by Cactus lovers. Its botanical position must rest for the time undetermined, though the probability is that it is an undescribed species. Meanwhile, to distinguish it temporarily, we may call it the Eagle's Claw Echinocatus.

1533

Wis Cigeni

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cm
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MISSOURI BOTANICAL GARDEN

; but it has the great merit of being Japanese. introduced with Cymbidium virescens and eres, by Sir C. W. Strickland, Hildenley, who twice most kindly sent me materials. y pleased to dedicate this curious novelty to nan who has a heart for Orchids, even though neter of their flowers do not exceed a line, colour be green. *H. G. Rchb. f.*

DENDROBIUM PRÆCINCTUM, *n. sp.**

is a botanical novelty. The narrow, erect e dark and furrowed, and the leaves lanceo- arly bidentate. The flowers scarcely exceed inch in length, and are of a pallid ochre colour dark purplish limb. The lip is trifid, and of ur-yellow colour, orange-coloured in front, lobe of lip velvety and three-keeled. I have k Messrs. Veitch for it, and they kindly inform t it was introduced with D. Devonianum. It is this nice little thing has been overlooked so time. *H. G. Rchb. f.*

THRIXSPERMUM FREEMANII, *n. sp.*†

s is a dwarf small species, yet an elegant thing. ots may be compared to those of Phalænopsis eriana. They are roundish flat, ancipitous, d with small warts. The leaves are ligulate, nd there undulate, bidentate, usually unequally their apex, 6–7 inches long by 1¼ inch wide. aceme bears numerous flowers. The bracts are vate and larger than the small ovary. The sepals long, narrow, linear, the petals a little shorter. gether they give the raceme the appearance of a w brownish spotted broom. The small lip is te tridentate, the centre white, the lateral parts w with brown streaks. There stand four-stalked lar bodies before the base, which are covered with l warts.

he plant comes near T. divitiflorum (Sarcochilus iflorus, F. Müll.), an Australian species, repre- ed on the cover of Mr. Fitzgerald's Australian hid-book. A scientific investigation of this proves be widely different, though very much alike ou- . There are no stipitate globules in this which rs a retuse tridentate lamina over the very small dle lobe of the lip. It is very interesting that this cies was found on the hunting grounds of several eedingly experienced botanists. It was gathered in am by Mr. Freeman, whose name it bears. It vered last winter at Mr. Bull's establishment. I ained a fresh spike, a second spike very carefully ed by Mr. Bull, and I saw the living plant lately. *G. Rchb. f.*

THE BOTANIC GARDENS, BIRMINGHAM.

AN extraordinary group of twelve large plants of ypripedium spectabile, the Moccassin plant from orth America, is now to be seen in bloom here, and luxuriant health. One plant has thirty flowers, ch very large compared with the blooms usually en, and borne in pairs, and in many instances three looms on each shoot. There is considerable varia- on in the group, some being much darker than the thers, whilst others are striped, and one is very pale n colour. Then there is also a difference in the

water given to them until they began growing, when water was applied copiously; and were kept in this frame until in flower, when they were removed to the conservatory. Some of the foliage is 5 inches long and 4 inches in breadth, and all the plants are in most vigorous health. Adjoining this group are a couple of fine plants of Cypripedium parviflorum, a small-growing species with yellow flowers and in the most perfect health, having received the same treatment as C. spectabile. Close by were plants of Dolecatheon elegans, Primula farinosa, Lychnis alpina major, a very charming Saxifrage, allied to S. Aizoon, received from Mr. George Maw, of Broseley; and a fine plant of Orchis foliosa. In the conservatory are fine examples of the old Erodium anemonæfolium, and Lilium giganteum in flower. How Lapagerias luxuriate here, and what grand objects they are at the blooming time. Mr. Latham has a strong plant of the white variety, with young vigorous growth now 6 feet long; and this is planted to intermingle with the rose-coloured variety.

When did China Rose White Pet originate? There is a plant of it now in flower in the conservatory, which is indeed lovely, Mr. Latham having obtained a plant in a Cheltenham nursery, where he met with it, but has never seen it elsewhere. It is a small-growing kind, and has the appearance of being the result of a cross between the Fairy Rose and a Noisette. The flowers are white, erect, small, and well-formed, and just what we should value for bouquet purposes, and it is a very free bloomer. Can any of your readers give further information respecting it? Several large plants of Eutaxia myrtifolia are blooming in the conservatory, which also contains two very rare Ferns —one, a superb specimen of Dicksonia arborescens, probably unequalled in the kingdom, and a fine plant of Cyathea Cunninghami. Orchids are extensively grown here, and a block of Dendrobium Falconeri has just had twenty five fine blooms upon it, and Chysis Limminghi and several other Orchids are now in bloom.

The Anthuriums under Mr. Latham's treatment are examples of first-class culture. There is one plant of Anthurium Scherzerianum, large variety, with sixty expanded blossoms, with spathes of the largest size I have seen. Disa grandiflora is on the point of blooming, and this glorious plant is too seldom seen in really good condition. The best lot I ever saw was at Mr. Edward Salt's, Ferniehurst, near Leeds, when they were grown in the shadiest part of an Odontoglossum-house, and were as much at home as at the top of the Table Mountain at the Cape.

There is a very good collection of hardy Ferns here, and amongst them the truly lovely Polypodium vulgare elegantissimum is a gem, but prone to revert to its normal state—that of P. vulgare, from which it is a sport. Mr. Latham has a crested form of Lastrea marginalis, sent from Canada by Mr. Goode. Is this variety to be found in other collections? The pretty Lastrea fragrans (Aspidium fragrans) does well here, and has a just claim for its specific appellation. Ceterach aureum is also to be seen here in fine character. Excellent specimens of Gleichenia dichotoma and G. Speluncæ, in good health, may also be seen, and a fine plant of Asplenium septentrionale, a most

the vicinity of large towns, and sad evidences of it may be seen in every suburb around the metropolis.

With the exclusiveness natural to the Englishman, when mansions and large villas are erected the gardens of such residences are, as a rule, screened from public observation by high walls or impenetrable palings, and the flowering trees and evergreen shrubs are thus guarded from the sight as well as from the destructive fingers of thoughtless youths; but between these carefully protected grounds and the town itself there often lies an intermediate district which, marked by the ominous boards bearing the well-known words "Land to let for building purposes," becomes the prey of all the idlers of the vicinity.

Such neighbourhoods have, at first, more or less an air of rusticity about them; a few fine trees may still be standing, the fields about to be immolated on the altar of the builder are still partially free from bricks and mortar, and handsome hedges in many places enclose the land or mark the boundaries of cottage gardens. Such spots are refreshing to look upon, but no sooner are they laid open to the public or their future destination pointed out by the board above mentioned, than the work of wanton destruction begins, the trees—not one of which can be well spared—are needlessly cut down, or ruthlessly destroyed by being dragged away a branch or a bough at a time in mere wantonness, for no sooner are they obtained than they are torn leaf by leaf and scattered to the four winds of heaven.

In spring, when the tender green of the opening foliage imparts an air of refinement and a touch of beauty to the surrounding neighbourhood, then is the moment of attack; the beautiful flowering trees and shrubs, the Laburnums, the Lilacs, and the Hawthorns are torn away for a momentary gratification and then left to fade and be trampled under foot in the very place where they so lately shed beauty and fragrance.

In the suburbs of London on Whit Monday I saw an old and very handsome Hawthorn hedge, the fence to a row of private gardens, was torn almost away by young men of twenty pulling off boughs as large as they could carry, running frantically about waving the beautiful blossom-laden boughs above their heads, and then throwing them down. So generally, indeed was this the case that the field was soon literally covered with fragments of Hawthorn. Nor did the mischief end with the hedges; wherever there was a gap large enough to admit a hand and arm, the Wallflowers and other spring plants within reach were torn off, and scattered about in a similar manner.

In the present day, when the town is so fast absorbing the country that every space of open green field and every sheltering tree is a boon to the neighbourhood in which it flourishes, and the destruction of vegetation may well be watched with a jealous eye for barrenness and sterility follow the footsteps of the builder with as little reason, and more surely than they do those of the holiday folk and the children; for when houses are built in the suburbs the first thing done towards the formation of what is in time is to eradicate every cut down, sl

GEORGE ENGELMANN PAPERS MISSOURI BOTANICAL GARDEN

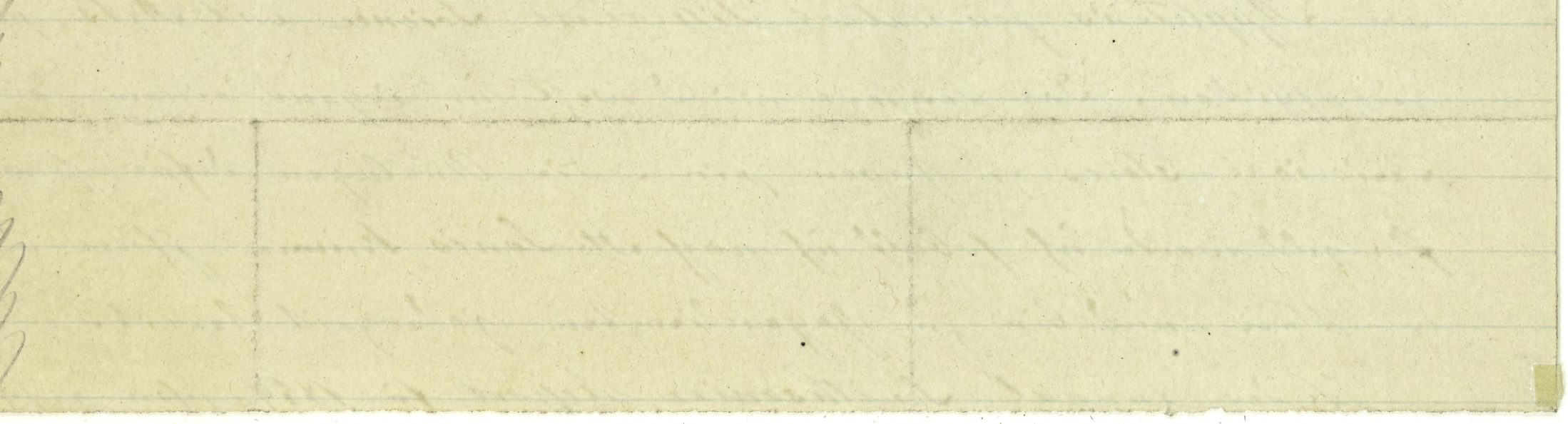
Le Conte ?

Parry's mark: 10.

1534 Nov 1870

Very plant, 4 1/2 - 5 inches diam, globose, 13 ribs sinuate, areolae 7-8 lines long, oval, 1/4 - 1/3 inches apart,

central spine 4 pronged with 3 to 4 upper ones 2-3 inches long angulate, cross ribbed, all curved ashy red — 7 radial spines ~~about~~ like those of areola and 8-12 slender bristly, often twisted whitish ones above.



Asa Gray
Cop.
Junge
Parry

Allenton, St Louis Co, Mo. Novbr: 8th, 1870.

MISSOURI BOTANICAL GARDEN
GEORGE ENGELMANN PAPERS

Lieber Hr Doctor

Bei meiner letzten Anwesenheit in St. Louis fand ich bei meiner Rückkehr, daß der Druck meines Aufsatzes nicht unter 300 Dollars zurückgestellt werden könnte. Diese Summe war mir dann doch zu hoch, und ich schickte meinige Zeit darauf meinen Aufsatz an Prof. Joseph Henry mit dem Ersuchen, denselben zu criticiren wie er sich dessen anbieten sollte. Nun höre ich aber, daß Henry noch in Europa sein soll. Könnten Sie mir vielleicht gefälligst etwas Licht darüber mittheilen ob Henry schon zurückgekommen?

Noch möchte ich Sie bitten, wenn es Ihnen nicht zu viele Umstände macht, mir eine der letzten Nummern von Dillmann's Journal, das Sie wahrscheinlich noch erhalten werden, so wie auch eine der letzten Nummern von Appleton's Journal of Literature, Science and Arts, per mail zuzuschicken. Der Letztere wird wohl in irgend einem der Buch- und Periodical-Stores zu haben sein. Die Rückzahlung derselben, so wie des Porto's werde ich sobald ich nach St. Louis komme, Ihnen direkt erstatten, und bin zu Gegendiensten jederzeit bereit.

Ist der annual Smithsonian Report für 1869. schon erschienen?

Cy Grindrod ? 1534-A

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DIPLOTHEMIUM caudescens ..	Nov.	15	130
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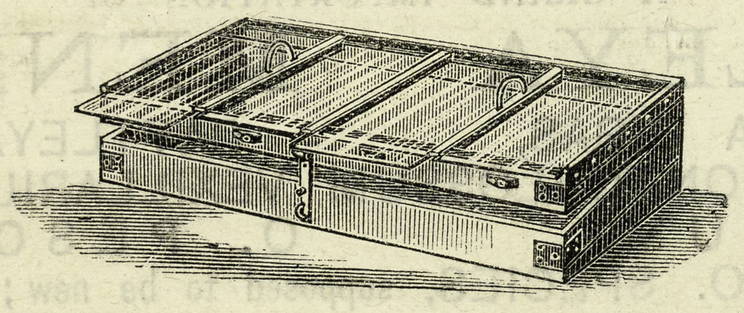

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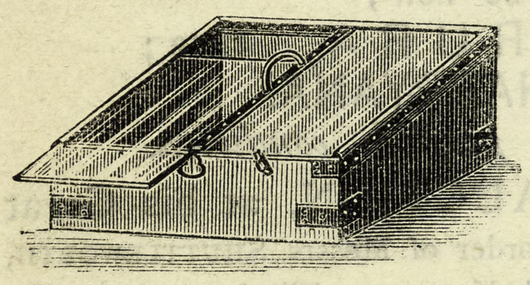

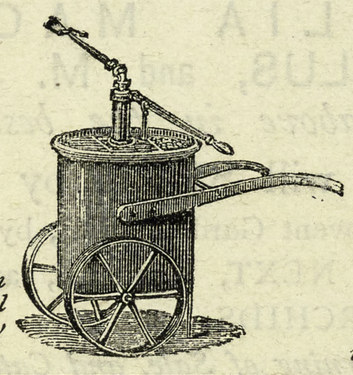

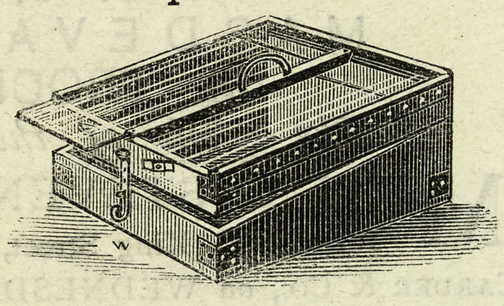

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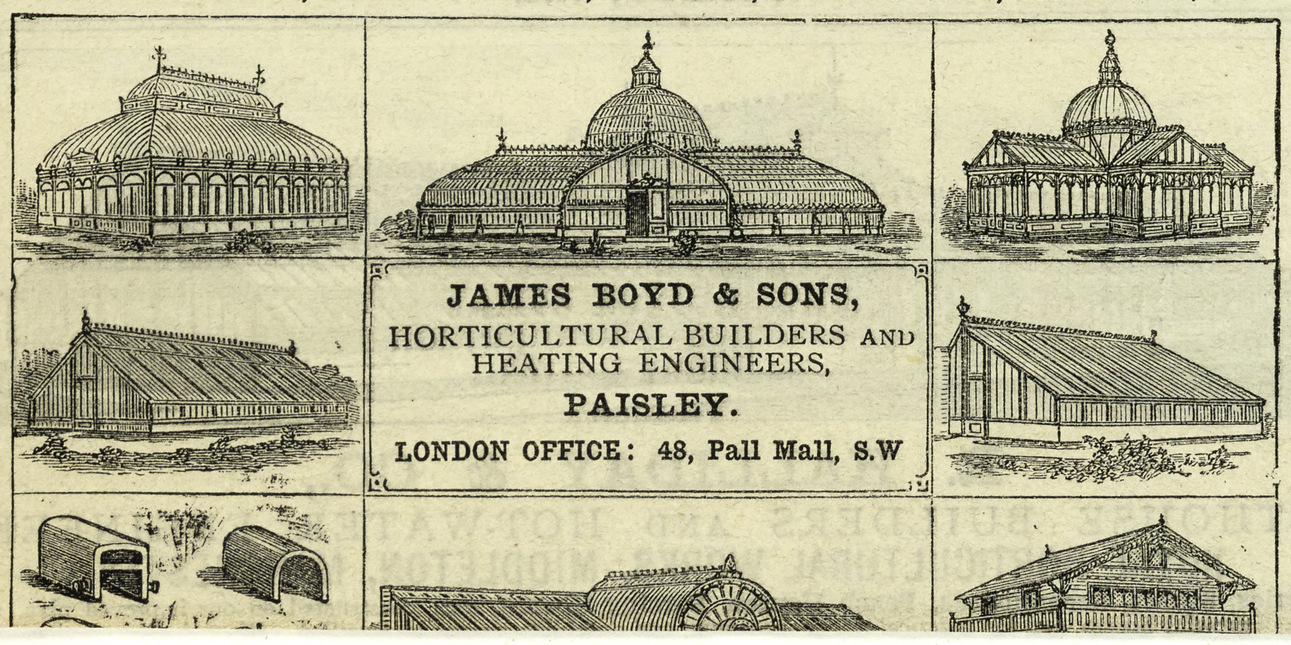

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The Vineyard and Nurseries, Garston, near Liverpool,

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MISSOURI BOTANICAL GARDEN

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GEORGE ENGELMANN PAPERS

Speciality for Roses.

BEESON'S ROSE MANURE.
To be had of all Nurserymen, Seedsmen, and Florists.
For particulars please apply to
W. H. BEESON, Carbrook Bone Mills, Sheffield.

Amortiser.—Amortiser.—Amortiser.

To HOP and FRUIT GROWERS, FLORISTS, MARKET GARDENERS and OTHERS.

STEVENS AND CO.'S AMORTISER INSTANTLY DESTROYS Hop Flea, Green Fly, Caterpillar, and every kind of Blight. Fruit Growers, Florists, more especially Rose Growers, will find this preparation invaluable, as one application causes INSTANT DESTRUCTION of all INSECT PESTS. For Hothouse, Greenhouse, and other Plants it is equally valuable, and is guaranteed not to injure the most delicate bloom or foliage. We have a Special Preparation of the Amortiser for Watering the Ground which Instantly Destroys Slugs, Wireworms, Caterpillars, Grubs, &c When ordering state which preparation is required. Sample Cans, 4½ gallons, 3*s.* 6*d.*, tin included. Special Quotations for Large Quantities.
Orders received at 67, High Street, Borough, London, S.E.

Important Discovery.

For Cleansing Plants from Aphides and all Parasites—To Prevent American Blight, and all kinds of Scale, &c., and for Washing all Hard-Wooded Plants, always use

HUDSON'S SOAP.

A ¼ lb. Packet to 3 Gallons of Water.
A strong solution thickened with clay makes an effective Winter Dressing.

Testimonial.

"Coton Hall Nursery, Shrewsbury, July 28, 1880.
"We find Hudson's Soap a very useful Winter Dressing for all kinds of Fruit Trees; both as a preventive and cure against American Blight and all kinds of Scales. We also use it for Camellias, Azaleas, Rhododendrons, and all kinds of Hard-wooded Plants. We have much pleasure in presenting you with this testimonial, and remain, yours truly,
(Signed) "JOHN JONES AND CO."

REMARKABLE DISAPPEARANCE!
of all DIRT from EVERYTHING
BY USING
HUDSON'S EXTRACT OF SOAP.

GISHURST COMPOUND.—Used by many of the leading Gardeners, since 1859, against Red-spider, Mildew, Thrips, Greenfly, and other Blight, in solutions of from 1 to 2 oz. to the gallon of soft water, and of from 4 to 16 oz. as a winter dressing for Vines and Fruit Trees. Has outlived many preparations intended to supersede it. In Boxes, 1*s.*, 3*s.*, & 10*s.* 6*d.*

AMERICAN BLIGHT on APPLE TREES CURED by rubbing a wet hard Painter's brush on Gishurst Compound, and working the lather into the infected part.

GISHURSTINE, for dry feet and boot comfort, is much used by Gardeners, Farmers, Ladies, Sportsmen, and Shore-waders; is sold by Nurserymen and Oilmen, with testimonials and directions for use, in boxes, 6*d.* and 1*s.* each. Wholesale by PRICE'S PATENT CANDLE COMPANY (Limited), London.

FLORAL GUM.

This Gum is guaranteed to effectually secure the petals of flowers from falling. It is easily applied—dries instantaneously—and leaves no stain on the blossom.
Universally approved of by the leading Florists and Growers.
(*See Testimonials.*)
"18, Westbourne Grove, W., June 18, 1883.
"GENTLEMEN,—We have much pleasure in testifying to the excellence of your Floral Gum, which we have used for some years. It fixes the petals of flowers without injuring or staining them.—Yours faithfully, "JAS. H. POUNCE AND SONS."
"Messrs. HAWES & CRISP."
CRYSTAL GUM .. 2*s.* 0*d.* pint. 3*s.* 6*d.* quart. 12*s.* gallon
OPAQUE ,, .. 1*s.* 6*d.* ,, 2*s.* 9*d.* ,, 10*s.* ,,
Sample Bottle of either kind sent post-free for 1*s.* 3*d.* in stamps.

HAWES & CRISP,
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SILVER SAND
DIRECT FROM PITS.

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INDIAN MUSLIN, for Garden Shading.—100 yards for 10*s.*, delivered at Burnley Station; or 85 yards for 10*s.*, delivered free per parcels post. Very useful pure Cotton for Curtains, Blinds, Draperies, &c.; cream colour. Postal Order to be sent with each Order. Send stamped envelope for Pattern.
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ITALIAN RYE-GRASS, PERMANENT PASTURE GRASSES, &c.
Samples and Quotations on application.

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EARLY WHITE ROMAN HYACINTHS.
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THE ABOVE VALUABLE BULBS FOR EARLY FORCING,
and will be pleased to receive Orders for immediate delivery.

ROYAL EXOTIC NURSERY, KING'S ROAD, CHELSEA, LONDON, S.W.

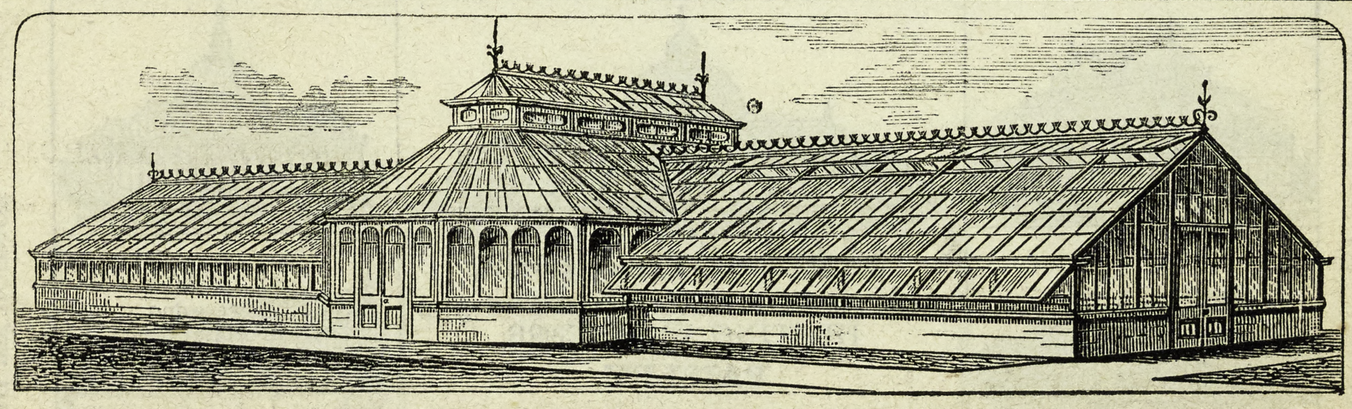
WEDNESDAY NEXT.—(Sale, No. 6440.)

A GRAND IMPORTATION OF
CATTLEYA MENDELII,
CATTLEYA GIGAS, CATTLEYA AUREA,
ODONTOGLOSSUM VEXILLARIUM,
O. CRISPUM, O. PESCATOREI,
O. SPECIES, supposed to be new;
MASDEVALLIA MACRURA, rare;
M. TROCHILUS, and M. HARRYANA.
The whole of the above in the best possible condition.

MR. J. C. STEVENS will SELL by AUCTION, at his Great Rooms, 38, King Street, Covent Garden, W.C., by order of Messrs. SHUTTLEWORTH, CARDER & Co., on WEDNESDAY NEXT, August 8, at half-past 12 o'Clock precisely, the above fine IMPORTATIONS of ORCHIDS.
On view morning of Sale, and Catalogues had.

AUCTION ROOMS AND OFFICES, 38, KING STREET, COVENT GARDEN, LONDON, W.C.

Five 1st Prize Medals recently awarded in open competition.



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1535

Dr Le Conte on Californian Echinocacti

Letter dated Phila Dec 27 1852

Echinocactus east of San Felipe; notes made on the spot: "3 feet high 1/2 in diameter, 27 ribs spines mostly hamate; sometimes several plants from a single base." (probably E. viridescens β. cylindraceus)

I am inclined to take that for a species distinct from the Gila species:

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Echinocactus cylindraceus Eng. Cact Bound. p 25 tab 30.
San Diego County & Agassiz in the Hassler Exped. 1872
Young specimens, globose, 3/4 inch in either diameter.
13 tuberculated ribs.
Spines as described in Boundy Report, only lower radial
spine not stout, but hooked, but flexuous & curved
all the spines more or less curved towards the body of the plant.
Upper central spine large or lower, curved upward
all the spines remarkably reddish & annulated.

Decemb 2° 1872

Dr. Asa Gray
Cambridge
Mass.

Compliments of the Author

Dr. George Engelmann M. D.
with kind regards
of
Chas. C. Parry.

1536

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Missouri Botanical Garden Archives
C. C. PARRY.

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Sir:

The regular meetings of the Academy of Science, take place every first and third Monday of each month.

Your punctual attendance is requested at such meetings, and especially at the next one which will be held next Monday, Dec. 2nd /z *at 7 1-2 P. M., at the Polytechnic Hall.*

C. V. RILEY,

Recording Secretary.

P. S. The meeting will be a conjoint one of the Academy and the Historical Society.

C. V. R.

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Echeveria cylindrocea ?

fruit only, coll by Bdchtt, Wheeler Exped. 1871

Berry 40–50 seeds in 2. 11. spirals — 7/18 orders 1537

20–30 (rarer reply

20–30 Cancellate lacunose petals greenish yellow (border of tip 20–25 mm long)

nectariferous spaces remote, scarcely 1 mm long

stamens part 6 mm long, wide fusiform-shaped

style 22–26 mm long, divided beyond the middle ÷ 16–13

(Crassulaceae polyandrophorous)

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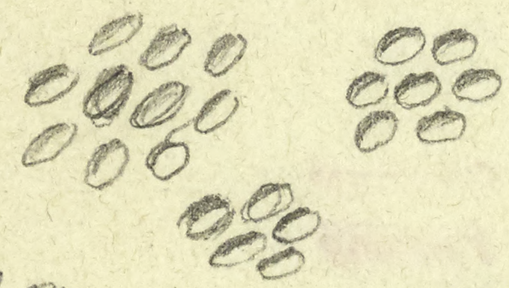
Echinocactus cylindraceus

Arizona, Bischoff 1871

Oct 24 1873

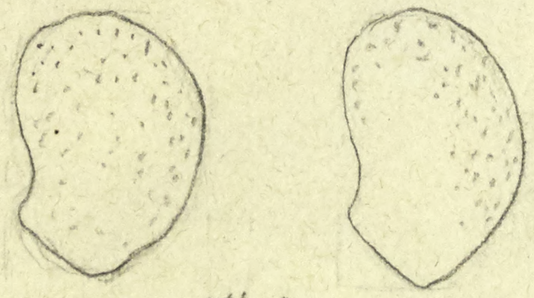
on side



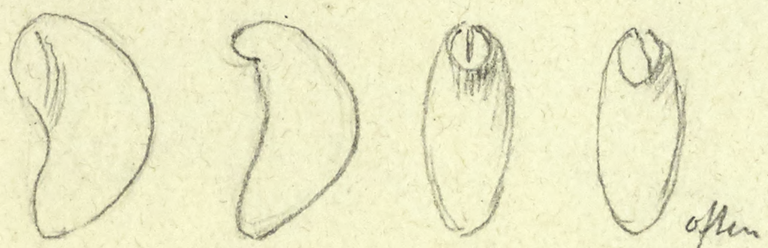
on top

shallow pits on seed x 60

x8



seed pitted often a little facetted, or irregularly compressed



often somewhat obliqum

1538

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Newberry Cact 1858

Jan 1859

Very ?

n. sp ? polycephalus ? cylindraceus ?

Newberry

Echinocactus ~~La Conte~~

Dr Newberry Coll. 1858

on the Colorado

1 smallest specimen 3 inches high, 2 inches diam.

8 rib below, above already 13 ribs ; lowest spines

3/4 inch long, 8 radial 1 central, (tenuis) hooked,

central spine red, annulated, not quite terete, flatten

on the upper surface, hook more or less strong ;

4 dagonal spines thicker and more nearly approach

to the central one, upper lower and lateral one

smaller and more exterior, Higher up on this

specimen the spines become more numerous ; and

4 central spines can be recognized, the 3 upper radial

spines of the former (very) tubercles forming

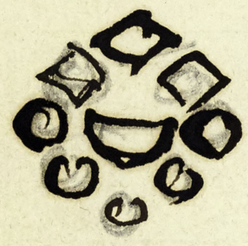
here the 3 upper central ones, and 3 to 6

new upper spines appear) ; always smaller

than the lower radial spines.

2/ Specimen 6 inches high, 4 in diam. with 13 ribs

most bunches of spines with 8 radial spines



the upper one the stoutest, 4 angular, as stout

as the slightly curved, not hooked,

Central spine.

1539

Only a few of the upper most Bunches

have 3 additional smaller exterior

spines above, so as to form a circle

of 8 exterior around 4 interior spines

Lower central flattened above curved to below,

or rounded ; V. upper central curved downward a little shorter,

flattened carinate both sides, curved upward ;

upper addl 2 lateral spines flat. All spines

annulate, reddish somewhat pubescent when young

Ribs even in the oldest ~~youngest~~ part of the

plant distinct, in the upper part interrupted

or subundulate

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This seems to be E. cylindracea Engl. Boundary although the spines are shorter, thinner & less numerous than in Dr Parry's original specimen; nor do we find the Cowest spine hooked.

It may be a very young E. polycephalus.

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Jan 1883

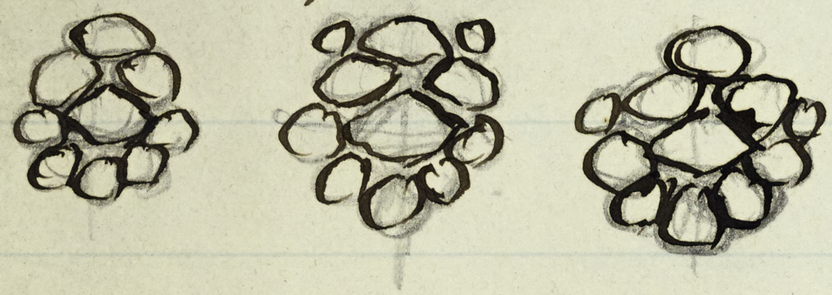
Echinocactus from Arizona, C. H. Haskell Esq, A. L. Siler min.

probably a young E. Wislizeni

1540

Globose, 4 inches diam & high; 13 ribs, acute.

Areolae short oval; Spines rather equal, no bristles; in lower part of plant 9 on upper part 11, one of them, the lowest, central, the three upper ones, however, with the central one forming that will probably be in the adult plant the 4 central spines; the additional 10 & 11 spines are



weaker and paler and upper lateral to the uppermost or lateral to the next lower pair of the upper 4 (central) spines; the other spines are nearly equal, reddish, strongly ribbed, nearly straight or slightly curved

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Stages of areola incorrect, here,
is oval

Echinocactus cylindraceus Eng.

Colorado Desert, D. Coulter 1870

probably grey var Gigas

all spines grey reddish all the stouter
ones cross ribbed, thin subtle spines white

1541

4 central, 3 curved up, lower curved down
4 lower radial and a fifth lowest, thinner
The same — — —

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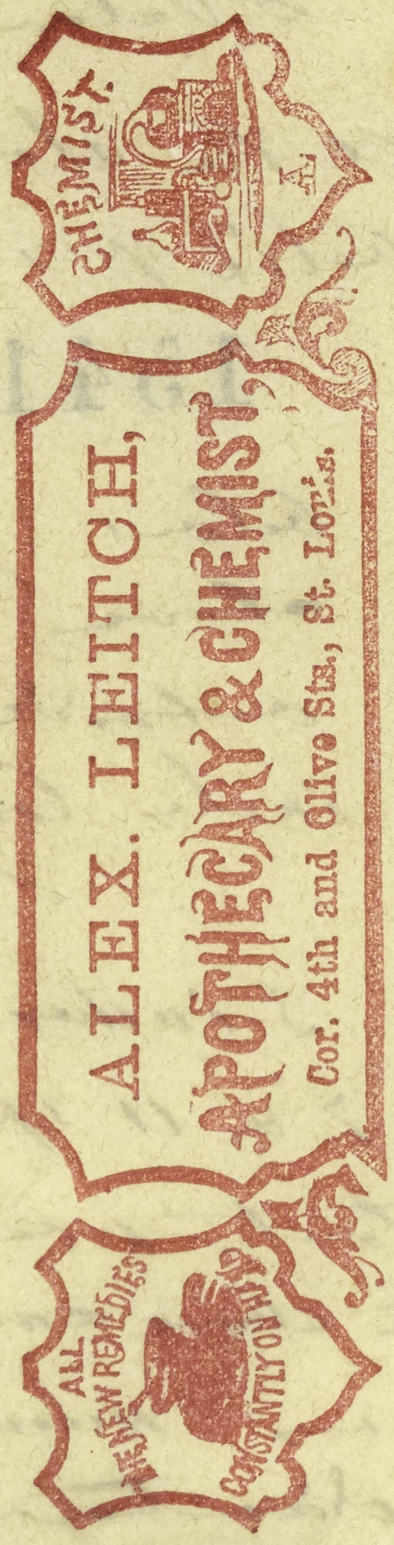

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1542

Echin^{s} cylindraceus
Jaskes, Chesapeake 1873

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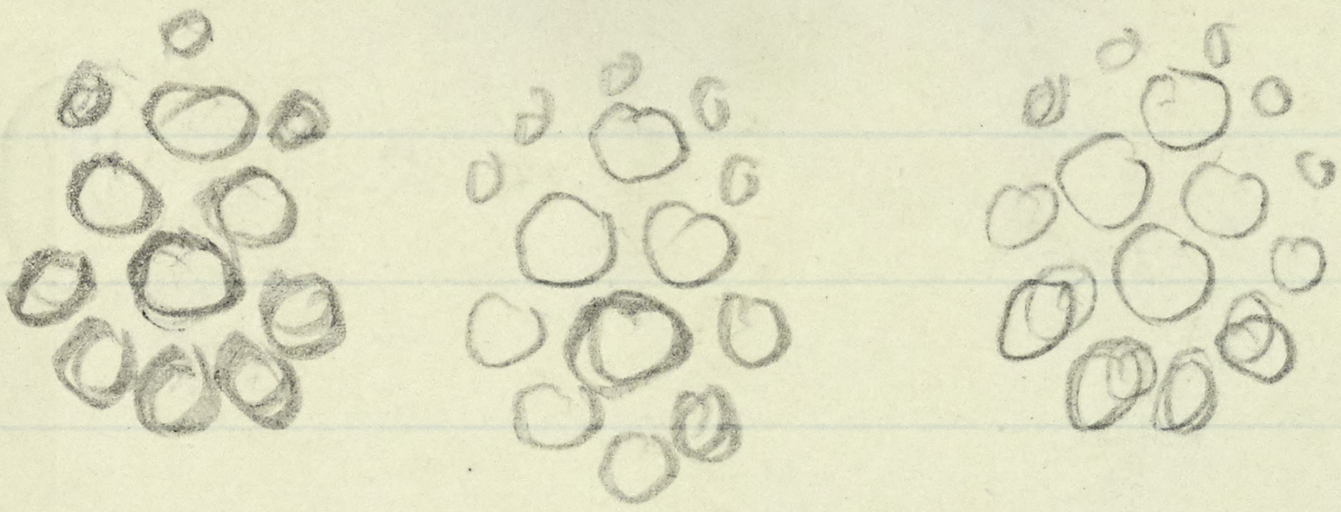
May 1st 1883



1543

Chrysothamnus ×ceruthamnoides

13 ribs — globose ¼–5" high

ribs sharp. interrupted

areoles oval, with light brown wool

spines about 12 (or 10–15) rose colored

straight or slightly curved lowest

sometimes hooked — all the shorter

ones accumulated, 4 interior shorter; upper most radial weakest

A L Solar white; mostly many headed —

hair concealed by many 33 in one bunch

the longest ¾ diam, very rarely single

Kanab Mountains Southern Utah

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Mankato. Apr 27th 1883

Dr Geo Engelmann

Dr Sir

Will you Kindly excuse me for troubling you once more. I have a plant, a liverwort that is new to me and I have no way of determining the same — If possible would you see if that it is — I send it to you in a small tin enclosed in a wooden box, by mail.

Respectfully

John Leiberg

Mankato.

Blue Earth Co. Minn.

P. O. Box 698.

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Echinocactus xeranthemoides n. sp.
On the Colorado, Tex.

Dec 5th 1891

seed smooth, brown shining

cotyledons parallel, very short

×8

12–15 slig

allan

hilum and chalaza

×10

8 m m

3 m m

12–15 filiform slig
2 lines long
with style 11 lines

1544

surface of seed ×150

petals

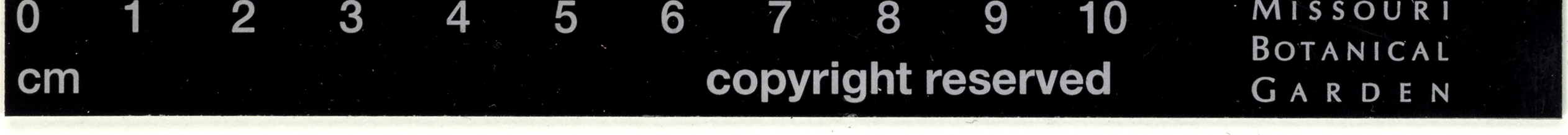
sepals with woolly axils

Pollen ×415

about over 100 sepals and 40 or 50 petals

0.050–052 m m

spines 1–1½ inches long
10 external, (5 above 5 below)
6 internal, central and lowest longest, stoutest, reddish – all annulate



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1544-A

2 Virolina

H. B. F. 1824

Echinocactus

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